

# Home

An Amiga Specialist Publication

# Computing WEEKLY

**SPECIAL  
SUPPLEMENT**

**No. 72  
July 24-31, 1984**

**45p**

**More**

## MSX

**Computing**

**Read the  
latest news  
and start  
learning  
MSX BASIC**

## WIN

**a weekend for  
two in Paris  
courtesy of**

## OPTIONS

**Software  
reviews for:**

**Spectrum,  
CBM 64,  
BBC/Electron,  
Dragon,  
Oric/Atmos,  
TI-99/4A**

## Spectrum program

**Howl googlies -  
and hit them  
for six**

## TI-99/4A

**program  
See how you  
grow as  
you eat**

**AND GAMES  
STAR FORCE  
SEVEN**



**ROBRIACE  
GODS SAVING**



**QUICKSILVER**



**MYSTERY  
OF THE  
JAZZ STAR**



**VELNOR'S LAIR  
QUICKSILVER**



## Copied tapes seized — Judge told

Computer copying equipment was seized in a raid on a doctor's home, a High Court judge has told.

Microdeal, the Cornish-based software company, had been granted a "watch and seize" order at a previous hearing.

It enabled the company to search the premises of Dr T. Mohamed in Stockton and take away any offending copyright material.

Microdeal alleges that Dr Mohamed and Mr T. Mohamed — believed to be Dr Mohamed's 14-year-old brother — have been copying Dragon games such as Eight Ball, Kaveerian Attack, Southern and Space War.

Miss Mary Victoria, for Microdeal, told Mr Justice Mayne Davies that the company had obtained "quite a lot of interesting material" when the order was executed.

She read a cross statement.

*Continued on page 5*

## School's over for Chris

A schoolboy is dropping his 'A' level course to focus on computer games. Christopher Kemp, 17, of Bournemouth, Stockfield, wrote the game Jack and the Beanstalk, currently high in the charts.

The game achieved top sales and provided a new without advertising. And the company marketing the game, Liverpool's House of Thor, is now planning a massive promotion for it.

Now Christopher, who feared he would be joining the dull career, may now join of thousands of parents in revulsion.

Christopher was studying physics, chemistry and computer studies at Jordan's Church school. He left before the end of the summer term of his first year in the sixth form. Assistant head, Mr Hault said "Christopher is a very capable young man with plenty of initiative. We wish him well."

Christopher is now signed up.

*Continued on page 5*

# SABRE WULF



The Green  
Anthony De La Rocha  
Lancaster  
LBA 5/11

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# Home Computing WEEKLY

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HOME COMPUTING WEEKLY  
BRITAIN'S BRIGHTEST



## MSX COMPUTING

Here's the third issue of MSX Computing, presented to you free with Home Computing Weekly. This is what's in store for you:

- Insight into who's planning what when
- Start learning how to program MSX BASIC

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Sabre Wolf	8.95	Phone 01451 5043 for enquiries			

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2. To make the match last you get...  
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100. You have been...

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## Tapes

From front page

by the solicitor who carried out the order in which he said that Dr Mohamed had "readily admitted" copying Microsoft's tapes and that he had found recording equipment, blank tapes and tapes which had been copied.

Korling, however, had been found at his brother's home.

Neither Dr Mohamed or Mr Mohamed were present or represented in court.

But Miss Vennart said Microsoft's solicitors had received a phone call from Dr Mohamed denying all knowledge of the matter.

The judge agreed to continue an order forcing Dr Mohamed to give evidence. Microsoft's copyright claim is further being set Friday. He refused to make any order against his brother.

## Chris

From front page

as a freelance for Thor and he will receive royalties for Jack and the Beansals. His brother, Steven, helped with the graphics, an outstanding feature of the game.

Christopher came up with the idea of Jack and the Beansals because he thought people were getting fed up with space games and shoot-outs. Now he is going to shake up some more new games.

Jack and the Beansals received a five-star rating when reviewed in Home Computing Weekly. "Frustrating but challenging, if you want a difficult action game then you cannot be recommended" is our reviewer's note.

Headmaster Ken Cook said he is not worried about Christopher dropping 'A' levels and he is sure he will be a big success as a computerist.

## No longer in the dark

Broadway Electronics about to unveil its manufacturing expansion plans by making microchips to numerous computer peripherals. Half-price parents of Irish students were delivered to their desks following the opening of new built test headquarters in Bedford in March. Plans have been kept in the dark while new marketing strategies were formed.

Microbeam Computers became the parent company, responsible for marketing and manufacturing. BBC-Electron sold-on Broadway Electronics became a subsidiary and continues as Microbeam's main arm. Microbeam Software and Microbeam Electronics are two other subsidiaries.

Paul Vaughan, managing director, said: "While conceding to manufacturers' proposals for Acorn, we will develop independent products in an unending degree". Broadway Electronics, Acorn Rd, Bedford MK43 8LJ.

## PSS track success

Kevin Brown, the motorcyclist sponsored by PSS, is having a successful season. He is currently lying fifth in the Marlboro's Championship. This is only his second season, yet he has completed over 30 races.

Kev is a 23-year-old Coventry pinner, who took up racing motor bikes as a hobby. His progress against local rivals was quick, and PSS decided to back him in a career on the track.

Kev has qualified for the Marlboro's Championship at Silverstone on September 12 and 13. PSS, 412 Stoner Avenue Act, Coventry CV10 5DG.

## Run for fun

The third annual Cambridge Festival half-marathon, sponsored by British Airways, has attracted a record 2,000 runners, including British Olympic marathon hope, Joyce Smith.

The half-marathon will take place on Sunday 10 July. Leading British staff have been persuaded to take part and the City and managing director Nigel Steele plan to join along with the race.

The race runs starts at 8.30 a.m. and the route is from Parkside Place, Cambridge through Fox Coneyway, Greenchester and Trumpington. If you would like to participate, call John Shury at Cambridge City Council on 0223 324877.

## Stop those headaches

Do you see spots before your eyes or feel a pounding in your ears after spending hours in front of your video screen? If so, you could be suffering from video disorders or headaches, known as problems faced by TV computer users.

You may find relief from

your ailments if you invest in an anti-glare filter available from Kongs. CEAF is a laminated filter combined with a diffused coating that which disperses glare and reflections. CEAF fits the contours of the screen and is fixed on by velcro.

CEAF will retail for under £28 and should be at stock at your major high street computer dealer.

Simon Patterson, 10, Stapeham Lane, Tyne and Wear NE21 5SG.

## Scary monsters

Just out on the Commodore 64 Range, from Audiogenic Audiogenic says that Horror Graphic Britain full screen graphics and "some of the most dramatic and voices monsters ever devised".

There's a monster who runs across from different levels of the screen. You must climb up and down ladders, avoiding monsters who are awaiting the house. The monsters react intelligently and try to trap you on a particular level. Price £3.95.

Audiogenic, 8 PO Box 88, Audingham, Berks.

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[illegible]

WRC No.	Driver	Co-Driver	Team	Time	Points
1	Colin McEneaney	John Smith	McEneaney	1:10.00	10
2	Colin McEneaney	John Smith	McEneaney	1:10.00	9
3	Colin McEneaney	John Smith	McEneaney	1:10.00	8
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5	Colin McEneaney	John Smith	McEneaney	1:10.00	6
6	Colin McEneaney	John Smith	McEneaney	1:10.00	5
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Disc Duplications — 35, 40, 60 track 5/4, 5/8, 5/16  
Turns

**Keywords:** *Parental involvement, child development, parenting practices, child health, child behavior*

Age Group	Percentage of Respondents
18-24	65
25-34	68
35-44	70
45-54	72
55-64	75
65-74	78
75+	80

Black Oxidation Process — built upon redox

Edwards, J. *et al.* — *Journal of the American Medical Association* — 1998, 280: 1001-1005.

Labels in brackets are not

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КРЕСТЬЯНИН ПОДНОСИМЫЙ

[illegible]



Our top prize in this week's competition is a weekend for two in Paris. Paris is an exciting city, the Parisians are stylish and elegant and enjoy the French tradition of drinking at roadside cafés and watching the world go by. You'll soon get into the swing of it.

Stroll along the Champs Elysees, drink the Bolleee Tennis and take a boat ride along the River Seine. Wondering the Louvre, Versailles and spend as long as you like in the Louvre. While Paris is rich in cultural heritage, it's also up to the minute in fashions and things.

There's so much to do in Paris that a weekend can only give you the taste of this city in the heart of France. The climate is justly world famous and never as cheap. And now you have the chance of viewing Paris — it Options's capital.

The top prize winner of this week's competition will be flown out to Paris courtesy of Options, and will stay in a hotel in Option's capital together with his or her companion. This is an ideal opportunity to enjoy an all round weekend break in the French capital.

Fifty additional prize-winners will receive one of Option's range of educational software, which runs on the BBC and Commodore 64. At the moment each tape costs £12.95 (£9.95 for dual in the price awards £5.00).

All you have to do is choose three applications for adult software. Options is planning to review non-technical software for Home and Data and wants you to send us your favourites as when would keep them foremost.

Options is currently preparing a holiday break package in which the user can access all necessary data, as well as a gardening program. What can you think of?

Options' educational software also involves parents. Each program has the facility for adult to check and guide. For example, after the drama program has been run, at what could you at

options which are relevant to the child's school subjects. That's one way of involving both parent and children.

Options is a new company formed in June 1984. Options wants to encourage adults to use home computers. David Collins, manager, said: "In 95 out of 100 cases Home and Data bought a computer for their child and hoped a weekend would help with homework. Our educational packages are ideal for that."

We continued: "What we want now is to provide software for their own use. There's nothing in the market at the moment for adult home. There's only games and technical packages like spreadsheets."

So put on your thinking caps and send us three original ideas — and you could find yourself on that plane winging its way to Paris!

#### How to enter

Write on the envelope, in order of importance: three original ideas for adult software. Explain clearly and concisely your reasons why each program would increase sales. Your ideas should be non-technical programs for adults with little or no knowledge of computing. Please do not include the names of any awards or past awards games.

Complete the answer "I'd like to go to Paris because..." in not more than 30 words. This will be sent in a few weeks, in the form of more than one person being eligible for the top prize.

Write in your name and address and company (Commodore or BBC). Complete the coupon clearly and fully — it will be sent as a card if you are a prize-winner. Please include your age if you are a top prize-winner and are under 14 you will need to be accompanied by an adult companion.

Send the coupon to: Options Competition, Home Computing Weekly, No 1 Children Square, London W1R 3AB. Entries close at 18.00 on the Friday August 10, 1984.

## Take off for a weekend in Paris courtesy of Options. And we're also giving away 50 tapes from Options

You must enter by using cards in your which, that each entry must be an original concept — that is clear — and related to a computer package. Important: please indicate carefully the problem or problem or educational concept which is addressed.

#### The rules

Options will run its accepted three prize-winner of August September. Options will also give away 50 tapes. The winners also receive a certificate. Details and copies of the competition. The Home and Data center. Every year of the Home.

## Options Competition

### Entry Coupon

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

I'd like to go to Paris because \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

post code \_\_\_\_\_

Computer (BBC or Commodore 64) \_\_\_\_\_

Age (if under 18) \_\_\_\_\_

Complete clearly and fully and if you are a prize-winner you will receive a certificate, your prize, plus a copy of the Home and Data Computing Weekly, No 1 Children Square, London W1R 3AB. Entries close at 18.00 on the Friday August 10, 1984.





```

220 IF v=1 AND w=15 THEN GO TO 510
230 IF v=16 AND w=146 THEN GO TO 500
240 IF v=147 AND w=202 THEN GO TO 520
250 IF v=202 AND w=233 THEN GO TO 530
260 IF v=233 AND w=254 THEN GO TO 540
270 IF v=255 AND w=249 THEN GO TO 550
280 IF w=270 THEN GO TO 560
290 IF v=1 AND w=43 THEN GO TO 510
300 IF v=46 AND w=123 THEN GO TO 500
310 IF v=124 AND w=188 THEN GO TO 520
320 IF v=182 AND w=201 THEN GO TO 530
325 IF v=202 AND w=205 THEN GO TO 540
330 IF v=204 AND w=230 THEN GO TO 550
340 IF v=231 AND w=270 THEN GO TO 560
350 IF ovr=0 THEN GO TO 100
360 IF bat=0 THEN GO TO 100
370 LET r=tot/ovr LET rs=STR$ r: PRINT AT 21,1; "Run Rate "
380 IF LEN rs<3 THEN PRINT AT 21,1;rs+"0": GO TO 430
390 IF LEN rs<3 THEN PRINT AT 21,1;rs: GO TO 430
400 IF LEN rs<3 THEN PRINT AT 21,1;rs: GO TO 410
410 IF tot>=50 THEN GO TO 470
420 LET ovr=tot+1
430 IF ovr=50 THEN GO TO 435
435 LET p=40-ovr: LET t=p/q: LET t=p/q
440 LET t=STR$ t: PRINT AT 21,17; "Reqd.R/R "
450 IF LEN t<3 THEN PRINT AT 21,27;t+"0": GO TO 480
460 IF LEN t<3 THEN PRINT AT 21,27;t: GO TO 480
470 IF LEN t<3 THEN PRINT AT 21,27;t: GO TO 410
480 PAUSE 5
481 IF INKEY$<"P" AND INKEY$<"R" THEN GO TO 480
490 PRINT TAB 4;AT 21,0; "*****"

```

GO TO 1



## Variables

100: scores for players on team 10000

1: variables for player, or score for current batter's number for scores of which batsmen fall out number of wickets fallen out total runs at current time at overs elapsed  
 2: current player's score  
 3: current bowler's number  
 4: ball number of current over  
 5: random number plus formula  
 6: run rate (total / ovr)  
 7: high score (for required run rate)  
 8: number of overs chosen (40 at 100)

9: 40-ovr (for required run rate)  
 10: p/q (for required run rate)  
 11: (bat+1) position for display  
 12: total runs at time for (required) of chosen  
 13: tot, as in line 11 "was the run" as combined  
 14: still lower chosen

15: STR\$(  
 16: STR\$(  
 17: keyboard response (over board)  
 18: data  
 19: player's status  
 20: home team  
 21: away team  
 22: keyboard response  
 23: number chosen  
 24: copy card  
 25: value match decide  
 26: response  
 27: out/covers again  
 28: details correct

Choose a county match or face some of the best international teams in One Day Cricket, a Spectrum game by R. Butcher

## How it works

40-41: set variables  
 100-101: check keyboard for keys  
 110-140: mode for this particular play  
 150-160: copy run rate/required run rate/over through over  
 170-180: work out/required run rate  
 190: check total played to run rate (as in 100)  
 200-210: work out/required run rate  
 220-230: response over required run rate and run rate, return to game  
 240-250: add wickets/runs to total/player's score  
 260-270: print result of ball as appropriate position  
 280-290: set team variables  
 300-310: print new data, updated if necessary after each ball  
 320: check if wickets equal 10 for end of game  
 330: check if score falls to zero,

if to return to game  
 340-350: check if BAL=1, if so "end of over" status also plays  
 360-370: check if end of over has been reached, if not return to game  
 380: "end of innings" proceed with if copy wicket  
 390-410: print out wicketed  
 420-430: check copy/over, match details correct  
 440: end screen  
 450-460: if wicket falls update team score game  
 470-480: set screen  
 490-500: animation  
 510-520: move details  
 530-540: USOC  
 550-560: set up screen display  
 570-580: set up screen display  
 590-600: set up screen display  
 610-620: set up screen display  
 630-640: set up screen display  
 650-660: set up screen display  
 670-680: set up screen display  
 690-700: set up screen display  
 710-720: set up screen display  
 730-740: set up screen display  
 750-760: set up screen display  
 770-780: set up screen display  
 790-800: set up screen display  
 810-820: set up screen display  
 830-840: set up screen display  
 850-860: set up screen display  
 870-880: set up screen display  
 890-900: set up screen display  
 910-920: set up screen display  
 930-940: set up screen display  
 950-960: set up screen display  
 970-980: set up screen display  
 990-1000: set up screen display

```

490 PRINT INK 4:AT 21,17:""
491 PAUSE 0
492 IF INKEY<>" " AND INKEY<>"0" THEN GO TO 491
493 PRINT INK 4:AT 21,1:""
500 LET tot=tot+0: GO SUB 700: GO TO 570
510 LET wtt=wtt+1: GO SUB 600: GO SUB 1000: LET pl=0: LET wtt=wtt+1: GO SUB 900:
GO TO 590
520 LET tot=tot+1: LET pl=pl+1: GO SUB 700: GO TO 590
530 LET tot=tot+2: LET pl=pl+2: GO SUB 900: GO TO 600
540 LET tot=tot+3: LET pl=pl+3: GO SUB 900: GO TO 610
550 LET tot=tot+4: LET pl=pl+4: GO SUB 900: GO TO 620
560 LET tot=tot+5: LET pl=pl+5: GO SUB 900: GO TO 630
570 GO SUB 640: PRINT BRIGHT 1: INK 3:AT 12,x1" = "1:AT 13,x1" & "1:AT 14,x1" &
"
1:AT 15,x1" = "1: GO TO 640
580 GO SUB 640: PRINT BRIGHT 1:AT 12,x1"01 "1:AT 13,x1"01 "1:AT 14,x1"01 "1:AT
15
,x1"01 "1: PAUSE 15: BEEP .01,0: PRINT BRIGHT 1:AT 12,x1"001"1:AT 13,x1"001"1:AT
15
,x1"01 "1:AT 15,x1"001"1: GO SUB 1000: GO TO 640
590 GO SUB 640: PRINT BRIGHT 1: INK 4:AT 12,x1" = "1:AT 13,x1" & "1:AT 14,x1" &
"
1:AT 15,x1" = "1: GO TO 640
600 GO SUB 640: PRINT BRIGHT 1: INK 3:AT 12,x1" = "1:AT 13,x1" & "1:AT 14,x1" &
"
1:AT 15,x1" = "1: GO TO 640
610 GO SUB 640: PRINT BRIGHT 1: INK 5:AT 12,x1" = "1:AT 13,x1" & "1:AT 14,x1" &
"
1:AT 15,x1" = "1: GO TO 640
620 GO SUB 640: PRINT BRIGHT 1: INK 6:AT 12,x1" = "1:AT 13,x1" & "1:AT 14,x1" =
"
1:AT 15,x1" = "1: GO TO 640
630 GO SUB 640: PRINT BRIGHT 1: INK 1:AT 12,x1" = "1:AT 13,x1" & "1:AT 14,x1" &
"
1:AT 15,x1" = "1: GO SUB 1000: GO TO 640
640 LET w=bat+1:
650 RETURN
660 LET i=i+1
670 LET w=i*pl
680 RETURN
690 PRINT AT 6,14:tot
700 PRINT AT 8,15:pl*10
710 PRINT AT 5,22:wd
720 PRINT AT 7,23:pl
730 IF wtt=10 THEN GO TO 770
740 IF bat=6 THEN GO TO 80
750 IF bat=6 THEN PRINT FLASH 1:AT 21,0:"END OF OVER": PAUSE 50: PRINT INK 4
:AT 21,0:""
: FOR a=5 TO 25 STEP 4: FOR b=2 TO 10: PRINT AT b,a:
"
: NEXT b: NEXT a: LET bat=0: LET w=0:
761 LET w=b*1: PRINT INVERSE 1:AT 24,4,20:" "1: IF b=6 THEN LET w=1
762 IF w=40 THEN GO TO 70
763 IF w=40 AND w=40 THEN PRINT AT 10,15:"40": LET i=i+1: LET w=i*pl: GO T
0 770
764 IF w=50 AND w=50 THEN GO TO 70
765 IF w=50 AND w=50 THEN PRINT AT 10,15:"50": LET i=i+1: LET w=i*pl
770 PRINT FLASH 1:AT 21,18:"END OF DRAWING": PAUSE 300: PRINT INK 4:AT 21,18:
"
780 INPUT "!! printer copy (y/n)?":c
790 IF c="y" OR c="Y" THEN GO SUB 3500: COPY : GO TO 790
791 IF c="n" OR c="N" THEN GO TO 790
800 IF w=50 THEN GO TO 811
801 CLS : PRINT " "1: FOR i=1 TO 11: PRINT TAB (20*i-1): NEXT i
802 PRINT AT 1,5:"Chalcedon":AT 1,18:pl
803 PRINT AT 2,14-LEN a1:a1:AT 2,18:"":AT 2,17:pl: PRINT AT 5,10-LEN w:w-1
1/2pl:
804 PRINT

```

# PROGRAM

```

805 RESTORE 805: FOR a=1 TO 11
806 READ w#
807 PRINT TAB (a);w#
808 NEXT a
809 DATA "B.Bosch","B.Bardie","K.McEwan","K.Fletcher","K.Park","B.Turner","B.P.
single","B.East","K.Philip","M.Foster","J.Lever"
810 GO TO 810
811 CLS : PRINT "*****": FOR i=1 TO 11: PRINT TAB (20);i; NEXT i
812 PRINT AT 1,3;"Lords"AT 1,18;w#
813 PRINT AT 2,14-LEN w#;w#AT 2,15;"":AT 2,17;w# : PRINT AT 5,INT 15-LEN w#-1
1/2;w#
814 PRINT :
815 RESTORE 815: FOR a=1 TO 11
816 READ w#
817 PRINT TAB (a);w#
818 NEXT a
819 DATA "D.Powell","G.Tavare","D.Brown","A.Lamb","B.Randall","I.Botham","B.Tay
lor","G.Dillley","M.Covers","M.Foster","R.Millie"
820 PRINT AT 19,15;"TOTAL:";w#;AT 17,14;"wks:";w#AT 17,20;w#
820 PRINT AT 20,10;w#AT 20,10;"":AT 20,11;w#;AT 20,13;"overs"
821 LET r=tot-his LET r=bat-tot
822 IF tot=r# THEN GO TO 710
823 IF bat=r# THEN GO TO 711
824 IF hi>tot THEN GO TO 712
825 PRINT AT 4,10-LEN w#;w#;AT 4,11;"draw with " ;w# 4,21;w# : GO TO 714
826 PRINT AT 4,10-LEN w#;w#;AT 4,12;"won by " ;w#;AT 4,23;"runs": GO TO 717
827 PRINT AT 4,10-LEN w#;w#;AT 4,12;"won by " ;w#;AT 4,23;"runs"
828 PLOT 12,172: DRAW 230,0: DRAW 0,-147: DRAW -230,0: DRAW 0,147
829 PLOT 159,33: DRAW 22,0
830 IF bat=hi THEN LET r=bat-tot
831 INPUT "2X printer copy "y/n";y#
832 IF y#="y" OR y#="n" THEN COPY : GO TO 730
833 IF y#<"n" AND y#<"m" THEN GO TO 730
834 INPUT "Do you want another innings?" ;y#
835 IF y#="y" OR y#="n" THEN GO TO 730
836 IF y#<"n" AND y#<"m" THEN GO TO 730
837 GO TO 770
838 INPUT "Game match details " ;y#
839 IF y#="y" OR y#="n" THEN BORDER 4: GO TO 30
840 IF y#<"n" AND y#<"m" THEN GO TO 735
841 GO TO 27
842 CLS : BORDER 4: PRINT " ...CLOSE OF PLAY..." : PRINT "As the sun slow
y sets over the cricket, we must bid farewell to another day's exciting cricket.
The teams, players and spectators will be here the same time tomorrow - will
you set a new record run total, or be bowled out for a record low ? Will one
of your batsmen score an all time record over 40 or 50 overs? Who knows what is
to happen in another game of..."
843 PRINT AT 15,8;"ONE DAY CRICKET"
844 PAUSE 0
845 LET bat=bat+1
846 RETURN
847 PRINT AT 18,22;w# : PRINT INVERSE 1;AT 7,21;" "
848 RETURN
849 PRINT AT 14,0;"EEE";AT 15,0;"EEE": PAUSE 35: PRINT AT 15,0;" " ;AT 1
4,0
850 RETURN
851 PRINT AT 14,2;"EEE";AT 15,2;"EEE": PAUSE 35: PRINT AT 15,2;" " ;AT 14
,2
852 RETURN
853 CLS : BORDER 4: BORDER 4
854 PLOT 15,137: DRAW 15,0: DRAW 0,-22: DRAW -15,0: DRAW 0,22
855 PLOT 38,137: DRAW 0,22: DRAW 15,-22: DRAW 0,22
856 PLOT 76,137: DRAW -15,0: DRAW 0,22: DRAW 15,0: PLOT 41,140: DRAW 15,0
857 PLOT 96,137: DRAW 0,22: DRAW 0,0: DRAW 0,-11: DRAW -0,11: DRAW -0,0
858 PLOT 126,137: DRAW 0,22: DRAW 0,-22: PLOT 124,147: DRAW 0,0
859 PLOT 151,137: DRAW 0,14: DRAW -0,0: PLOT 151,151: DRAW 0,0
860 PLOT 31,88: DRAW -15,0: DRAW 0,22: DRAW 15,0

```

```

1120 PLOT 39,85: DRAW 0,22: DRAW 15,0: DRAW 0,-11: DRAW -15,0: DRAW 15,-11
1130 PLOT 67,85: DRAW 0,22
1140 PLOT 95,85: DRAW -15,0: DRAW 0,22: DRAW 15,0
1150 PLOT 123,85: DRAW 0,22: PLOT 129,80: DRAW -15,11: DRAW 15,11
1160 PLOT 143,80: DRAW -15,0: DRAW 0,22: DRAW 15,0: PLOT 143,99: DRAW -15,0
1170 PLOT 159,80: DRAW 0,22: PLOT 131,110: DRAW 15,0
1180 PLOT 223,144: DRAW 0,40: DRAW 0,-40: DRAW 7,0: DRAW -93: PLOT 216,11: DRAW
0,93: DRAW 7,0: DRAW 0,40: PLOT 216,11: DRAW 20,0,PI/2
1190 PLOT 224,144: DRAW 0,-40: PLOT 226,144: DRAW 0,-40: PLOT 226,87: DRAW 0,-42
+ PLOT 220,90: DRAW 8,-8: PLOT 232,95: DRAW -4,-8
1200 PLOT 199,0: DRAW 0,80: DRAW -33,0: DRAW 0,-80: PLOT 183,8: DRAW 0,80
1210 CIRCLE 127,40,20: PLOT 127,20: DRAW 0,40: LET a=133: FOR b=20 TO 60 STEP 3:
PLOT a,b: NEXT b: LET a=131: FOR b=20 TO 60 STEP 3: PLOT a,b: NEXT b
1220 PRINT AT 14,2;"by";AT 18,2;"R.Batcher"
1230 PRINT AT 19,3: "YES"
1240 INPUT "Instructions ? (y/n)";a$
1250 IF a$="y" OR a$="Y" THEN GO TO 1290
1271 IF a$<"n" AND a$>"N" THEN GO TO 1260
1280 GO TO 1290
1290 DIM T% (15) : PRINT "INSTRUCTIONS FOR ONE DAY CRICKET": PRINT "
"
1300 PRINT "In this game you act for the side betting One Day Cricket consisting
of 40 overs(County) or 50 overs(International) ending either at the end of
the allotted overs or the loss of 10 wickets,whichever the sooner." : PRINT
T% "The scoreboard keeps you informed of what is happening after every d
elivery." : PRINT "For a ball to be bowled press either the keys 1 2 OR 3." : PR
INT INVERSE 1;AT 19,10;"PRESS ANY KEY"
1310 PAUSE 0: CLS : PRINT "These keys also simulate the batsmans stroke to th
at particular delivery.The keys represent as follows..."
1320 PRINT "1 DEFENSIVE STROKE"
1330 PRINT "2 ATTACKING/SOLID STROKE"
1340 PRINT "3 AGGRESSIVE STROKE"
1350 PRINT "By tactical use of these keys for each ball,you determine the out
come (NO-SKORING,SCORING, OUT)." : PRINT "By guessing the 1 key will not prod
uce as many runs as 2 OR 3 but there is less chance of being out." : PRINT
INVERSE 1;AT 19,10;"PRESS ANY KEY": PAUSE 0: CLS : PRINT "The following statisti
cs are also determined by the key chosen. (RUNS/OVER,RUNS/WICKET/OVERS/
WICKET)."
1360 PRINT "Apart from these set ratios,statistics into account are... (a)S
tatistics No (1-10) (b)Bowlers No (1-5) (c)Players current s
core For both (a)&(b)the best players have the lowest No. At t
he bottom left corner of the scoreboard will be a team displayed at random,
along with their score that you are trying to beat.Before the first innings,the
score is determined by choosing a SKILL FACTOR(1-5)." : PRINT INVERSE 1;AT
19,10;"PRESS ANY KEY": PAUSE 0: CLS
1361 PRINT "1 being the easiest.This score is then treated as a -51 score bein
g updated with your bats total; that is the case after every innings.After each i
nnings you have the option of changing the MATCH DATA which will result in a ne
w randomly chosen target independent of your bats score."
1362 PRINT "By pressing the R key you are given your RUN RATE and the SEQU
ENTIAL RUN RATE to beat the opponents total.This key will only operate at the
end of an over.Pressing R again will return you to the game.At the end
of the innings you are offered the option of a COPY of both the SCOREBOARD
and SCORECARD ON THE 15 printer."
1370 INPUT "Instructions again ? (y/n)";b$
1380 IF b$="y" OR b$="Y" THEN GO TO 1290
1391 IF b$<"n" AND b$>"N" THEN GO TO 1370
1392 DIM G% (PAPER 7): CLS : PAPER 7: PRINT AT 0,10;"MATCH DATA": PLOT 75,175: DR
W 0,-11: DRAW 89,0: DRAW 0,11
1393 INPUT "Data";g$
1394 IF LEN g$=12 THEN GO TO 1391
1395 PRINT INVERSE 1;AT 3,3;"Date" - "g$
1396 INPUT "No of overs";o$
1397 IF LEN o$=40 AND LEN o$=50 THEN GO TO 1394
1398 PRINT INVERSE 1;AT 5,3;"Overs" - "o$
1401 INPUT "Skill factor 11-51";s$
1402 IF s$<1 AND s$>2 AND s$>3 AND s$>4 AND s$>5 THEN GO TO 1401

```

# M PROGRAM

```

1403 PRINT INVERSE 1:AT 7,3:GOSUB factor = %g:
1404 LET hl=(4rows)+1:sk=251-INT (ROWS/251)+1
1405 INPUT "Are the above correct?";a
1406 IF a="Y" OR a="N" THEN RETURN
1407 IF 1407="N" AND 1407="N" THEN GO TO 1405
1408 GO TO 1390
1409 RESTORE 1400: FOR a=USR "a" TO USR "g": READ x: POKE f,x: NEXT f
1410 DATA 24,24,24,24,24,24,24,24
1411 DATA 0,0,0,0,11,11,24,24
1412 DATA 190,190,190,190,190,190,190,190
1413 DATA 0,0,0,0,254,254,190,190
1414 DATA 0,24,24,112,94,0,24,24
1415 DATA 0,0,0,0,0,0,192,192
1416 DATA 192,204,223,223,223,204,192,192
1417 DATA 192,192,192,192,192,192,199,199
1418 DATA 192,192,128,128,0,0,0,0
1419 DATA 12,12,24,24,48,48,94,94
1420 DATA 0,0,0,0,3,3,7,7
1421 DATA 192,192,192,192,192,192,192,192
1422 DATA 0,0,192,224,213,48,0,0
1423 DATA 24,24,24,40,44,129,129,129
1424 DATA 0,0,36,36,44,44,44,44
1425 DATA 180,180,140,44,44,129,129,129
1426 DATA 0,24,124,124,124,24,0,0
1427 RETURN
1428 CLS : PAPER 7: BORDER 0
1429 FOR a=3 TO 14: PRINT INK 5:AT a,0:"":NEXT a
1430 FOR a=3 TO 14: PRINT INK 5:AT a,29:"":NEXT a
1431 FOR a=0 TO 2: FOR a=0 TO 3: PRINT INK 5:AT b,a:"B":NEXT b: NEXT a
1432 FOR a=21 TO 30 STEP -1: FOR a=0 TO 3: PRINT INK 4:AT b,a:"B":NEXT a: NE
X
T b
1433 FOR a=4 TO 20: FOR a=3 TO 19: PRINT AT b,a:"B":NEXT b: NEXT a
1440 PRINT INVERSE 1:AT 4,13:"TOTAL":AT 5,20:"No. "
1441 PRINT INVERSE 1:AT 5,20:"Bel"
1442 PRINT INVERSE 1:AT 4,24:"1":AT 7,24:"2":AT 9,24:"3":AT 9,24:"4":AT 10,24:"
5"
1443 PRINT INVERSE 1:AT 4,14:" "
1444 PRINT INVERSE 1:AT 6,30:"NEXT":AT 8,15:" "
1445 PRINT INVERSE 1:AT 10,9:"DIVERS":AT 10,13:" "
1446 FOR a=0 TO 20 STEP 4: FOR b=12 TO 15: PRINT AT b,a:" ": NEXT b: NEXT a
1447 PRINT INVERSE 1:AT 17,18:"LAST"
1448 PRINT INVERSE 1:AT 18,18:"NEXT":AT 18,22:" "
1449 FOR a=14 TO 19: PRINT AT a,0:"UNUS":NEXT a
1450 FOR a=14 TO 19: PRINT AT a,29:"US":NEXT a
1451 RETURN
2000 IF a=50 THEN GO TO 2000
2001 RESTORE 2001: FOR a=0 TO INT (ROWS/16)+1: READ #a: NEXT a
2002 DATA "Ratis","Sussex","Sussex","Hudders","Surrey","Worcesters","Leeds","
Kent","Worce","Derby","Glouce","Glasgow","Northants","Leeds","Worcesters","Wor
ce"
2003 PRINT INVERSE 1:AT 17,5:""
2004 LET a="":PRINT INVERSE 1:AT 4,5:""
2005 RETURN
2006 RESTORE 2000: FOR a=1 TO INT (ROWS/16)+1: READ #a: NEXT a
2007 DATA "Australia","India","Pakistan","Sri Lanka","W. Indies","N. Zealand"
2008 PRINT INVERSE 1:AT 17,5:""
2009 LET a="":PRINT INVERSE 1:AT 4,5:""
2010 RETURN
2011 FOR a=1 TO 14: PRINT AT a,0:" ": NEXT a
2012 FOR a=1 TO 14: PRINT AT a,29:" ": NEXT a
2013 FOR a=0 TO 2: FOR a=0 TO 3: PRINT AT b,a:" ": NEXT a: NEXT b
2014 RETURN
9999 GOTO "cedey" LINE 1

```

# CHARTBUSTERS

BRITAIN'S SOFTWARE

# CHARTS

by the ASP Market Research Group

## ARCADE

- |                  |           |              |
|------------------|-----------|--------------|
| 1 Saboteur       | Ultimate  | Spectrum 11  |
| 2 Death Patrol   | Ultimate  | Commodore    |
| 3 Lord           | Allegro   | Commodore 10 |
| 4 Payton         | Hyper     | Spectrum 10  |
| 5 Omega Maze     | Commodore | Commodore 10 |
| 6 Tronik         | Quadrant  | Commodore 10 |
| 7 Deltan         | Hyper     | Spectrum 10  |
| 8 Son of Slapper | Allegro   | Commodore 10 |
| 9 Tronik         | Hyper     | Spectrum 10  |
| 10 Munch Mania   | Hyper     | Commodore 10 |

## NON-ARCADE

- |          |          |              |
|----------|----------|--------------|
| 1 Magic  | Ultimate | Spectrum 11  |
| 2 Magic  | Ultimate | Commodore 10 |
| 3 Magic  | Ultimate | Spectrum 10  |
| 4 Magic  | Ultimate | Spectrum 10  |
| 5 Magic  | Ultimate | Spectrum 10  |
| 6 Magic  | Ultimate | Spectrum 10  |
| 7 Magic  | Ultimate | Spectrum 10  |
| 8 Magic  | Ultimate | Spectrum 10  |
| 9 Magic  | Ultimate | Spectrum 10  |
| 10 Magic | Ultimate | Spectrum 10  |

Compiled with the assistance of Britain's leading software distributors, including: Pinnacle, SDL, PCS, Websters, PCS and Software Centra.

## SPECTRUM

- |                  |           |
|------------------|-----------|
| 1 Saboteur       | Ultimate  |
| 2 Death Patrol   | Ultimate  |
| 3 Lord           | Allegro   |
| 4 Payton         | Hyper     |
| 5 Omega Maze     | Commodore |
| 6 Tronik         | Quadrant  |
| 7 Deltan         | Hyper     |
| 8 Son of Slapper | Allegro   |
| 9 Tronik         | Hyper     |
| 10 Munch Mania   | Hyper     |

## COMMODORE 64

- |                  |           |
|------------------|-----------|
| 1 Saboteur       | Ultimate  |
| 2 Death Patrol   | Ultimate  |
| 3 Lord           | Allegro   |
| 4 Payton         | Hyper     |
| 5 Omega Maze     | Commodore |
| 6 Tronik         | Quadrant  |
| 7 Deltan         | Hyper     |
| 8 Son of Slapper | Allegro   |
| 9 Tronik         | Hyper     |
| 10 Munch Mania   | Hyper     |

## DRAGON 32

- |                  |           |
|------------------|-----------|
| 1 Saboteur       | Ultimate  |
| 2 Death Patrol   | Ultimate  |
| 3 Lord           | Allegro   |
| 4 Payton         | Hyper     |
| 5 Omega Maze     | Commodore |
| 6 Tronik         | Quadrant  |
| 7 Deltan         | Hyper     |
| 8 Son of Slapper | Allegro   |
| 9 Tronik         | Hyper     |
| 10 Munch Mania   | Hyper     |

Compiled by W. H. Smith and Wootton. Figures in brackets are last week's positions.

## VIC-20

- |                  |           |
|------------------|-----------|
| 1 Saboteur       | Ultimate  |
| 2 Death Patrol   | Ultimate  |
| 3 Lord           | Allegro   |
| 4 Payton         | Hyper     |
| 5 Omega Maze     | Commodore |
| 6 Tronik         | Quadrant  |
| 7 Deltan         | Hyper     |
| 8 Son of Slapper | Allegro   |
| 9 Tronik         | Hyper     |
| 10 Munch Mania   | Hyper     |

## BBC

- |                  |           |
|------------------|-----------|
| 1 Saboteur       | Ultimate  |
| 2 Death Patrol   | Ultimate  |
| 3 Lord           | Allegro   |
| 4 Payton         | Hyper     |
| 5 Omega Maze     | Commodore |
| 6 Tronik         | Quadrant  |
| 7 Deltan         | Hyper     |
| 8 Son of Slapper | Allegro   |
| 9 Tronik         | Hyper     |
| 10 Munch Mania   | Hyper     |

## Z801

- |                  |           |
|------------------|-----------|
| 1 Saboteur       | Ultimate  |
| 2 Death Patrol   | Ultimate  |
| 3 Lord           | Allegro   |
| 4 Payton         | Hyper     |
| 5 Omega Maze     | Commodore |
| 6 Tronik         | Quadrant  |
| 7 Deltan         | Hyper     |
| 8 Son of Slapper | Allegro   |
| 9 Tronik         | Hyper     |
| 10 Munch Mania   | Hyper     |

**MSX computers are big news. Backed by some of the biggest names in electronics, the stylish new computers are due in the UK from Japan in September.**

**In this issue of MSX Computing we question the companies about their MSX plans. And, in an exclusive article, Graham Knight, of Knights TV and Computers, gives you a head start in programming the MSX micros.**

# We give you the rundown on who's planning what for MSX

Yamaha's MSX<sup>2</sup> micro, due here in November, will also be a musical instrument, with its own remote piano-style key board.

The system will cost about £800 and will comprise Yamaha's C85 computer with a built-in sound module and added keyboard.

Jeffrey Owens, marketing manager for the company's UK arm, Renbale-Yamaha, said "With 48 preset sounds it can sound like a piano, trumpet, violin... any instrument you care to name."

"Composing is going to be one particular feature."

"One of the important points to stress is that the various sounds and sequencers that you get out of Commodore and Sinclair are not in the same league."

"The sound is very similar to our £200 synthesiser, which is a proper, pedigree musical instrument using proper classical notation."

The MSX computer from Sony will probably be called the Hi 80.

Sony's new business manager, Mike Mangin, explained:

"Until a week before we launched the Walkman we were in two minds about whether to use the name."

Number 3

**MSX**

July 24, 1984

# COMPUTING



"We thought, 'Why call it a silly name like Walkman... it's ridiculous.' We thought long and hard about it. But it's now part of the language. It has a personality and it's part of a lifestyle."

"A lot of the thinking behind the computer was done by the same people who are behind the Walkman, so we would

expect the same unique approach. The uniqueness of the name has been an advantage to the Walkman and it would be the same for the computer."

Sony's present range of products in the UK includes hi-fi, audio, video, TV and broadcasting equipment for both TV and radio.

And Mr Mangin said the computer would be sold through dealers, who are currently selling Sony products.

Answering criticism that the MSX standard could delay computer development, he said: "The only way we can forest computers is that they have traditionally been developed by boffins, reviewed by boffins and bought by boffins."

"They are people who are interested in computers for their own sake. We believe there are a lot of people who are interested in home entertainers, not just to do their own programming."

"There is a large number of people who are afraid of buying home computers. They are not sure what to buy and they have a whole list of fears."

The only reason for invasion was no being better to the consumer — which would be done with MSX — but there was no point in putting the money into a home computer to sort 30 megabytes of information more quickly.

Speed of games was important though. And the format allowed considerable sophistication, not only with discs and the CP/M business operating system to come, but also the possibility of a second processor — increasing speed by two to three times — within about three years.

He stressed, however, that the computers would always be upward compatible. The companies making them were highly competitive and thus only common ground was compatibility.

Mr Mangin said Sony would be bringing on its own

**Continued on page 3**





# New Series

# HOW TO USE YOUR MSX MICRO

MSX computers have been on sale in Japan since October 1983 and we have been fortunate enough to have had MSX models in *Appendix* since that time. The purpose of this series of How to MSX articles is to assist readers in understanding all the features and capabilities of the MSX range.

The MSX concept is a simple one — MSX seeks to set a standard for home computers. Manufacturers joining the MSX Group agree to make computers to the same technical and software specifications.

As all MSX computers have the same cassette, joystick, cartridge and printer interfaces software and peripherals made by any Toshiba will run on a Sanyo or any other MSX micro.

The MSX concept has had the backing of at least 20 of the largest Japanese electronic companies since 1983 and they have been joined this by European giants O.E.C. and Philips.

MSX has already taken a large slice of the Japanese home computer market. With the right of companies like Canon, Hitachi, JVC, Matsushita, Sanyo, Sony, and Toshiba combining to make computers to a single standard, there is no doubt that MSX will also take a substantial share of the European market.

The manufacturers are co-

ordinating their plans to "family computers".

All such MSX Group member also manufacture home entertainment products. It is no surprise that MSX micro can be interfaced with radio, TV, hi-fi and video equipment. JVC, the manufacturer which invented the VHS video system, has already shown its plans to interact actively with a video disc player. JVC and the other manufacturers are MSX as setting the standard for home computers, just as VHS sets the standard for video recorders.

Each MSX micro has an extended version of Microsoft Basic in ROM. Switching on a typical MSX micro loads the BASIC which is in a 32K ROM which occupies an area of memory from 0000 to 7FFFH.

The computer then finds the largest contiguous block of memory from FFFFH down to 8000H and uses this for program and data storage. All MSX micro start up with white letters on a blue background. The following is displayed at the top left:

MSX BASIC version 1.0  
Copyright © Microsoft  
32K Bytes free  
OK

The start up mode is SCREEN 0 (detailed later) and line 24 of the screen displays the words:

color auto goto list run

To assist users of the initial confusion of the line function keys. This line changes to show:

color auto\* goto list run

## ■ Program 1 — displays bars of all 16 colours

```
100 COLOR 15,1,1:SCREEN 2
110 OPEN "GRP:"AS#1
120 PRESET (35,5)
130 PRINT #1,"A CORRECTLY ADJUSTED BE
1"
140 PRESET (35,15)
150 PRINT #1,"#0000 15 COLOURS & BLAC
1"
160 CLOSE #1
170 FOR C0=2 TO 15
180 COLOR C0
190 LINE (C0*16-15,30)-(C0*16,184),0
200 NEXT C0
210 FOR C0=1 TO 12000:NEXT C0
```

## ■ Program 2 — shows all 256 characters

```
100 COLOR 15,4,4:SCREEN 1
110 FOR P0=0 TO 16
120 FOR C0=0 TO 15
130 IF P0*16+C0<256 THEN VPRINT 8H1042
+P0*32+C0*2,P0*16+C0
140 NEXT C0,P0
```

when the shift key is pressed function keys 1 to 5 become F0 to F5 when pressed with the shift. The usual reminder of the key definitions can be switched off and on with the KEYOFF and KEYON commands.

All MSX micro have 192 of built-in video RAM which is separate from the main memory. There is no reduction in the amount of memory free when you are in high-resolution or multi-colour modes. There are four screen modes which are specified by the first parameter of the SCREEN command.

The 16 colours available are:

- 0 transparent
- 1 black
- 2 medium green
- 3 light green
- 4 dark blue
- 5 light blue
- 6 dark red
- 7 cyan
- 8 medium red
- 9 light red
- 10 dark yellow
- 11 light yellow
- 12 dark green
- 13 magenta
- 14 grey
- 15 white

Program 1 displays bars of all the 16 colours on the high-resolution screen. After a short delay, the computer returns to the text mode.

Microsoft has previously given a great deal of thought to the character set as it contains all the usual letters and figures plus many language, scientific, game and graphical shapes. The German umlauts, the French accents, circumflexes and the mathematical symbols will be especially popular with schools.

Program 2 displays all the 256 characters on the screen. SCREEN 0 is the first of the two text modes and gives a format of 24 lines each with up to 40 characters. All UK MSX micro default to 25 characters per line when set to text.

The WIDTH command selects the number of characters per line. It is possible to get the full 40 characters by entering WIDTH 40.

All Japanese MSX micro default to 40 characters. Perhaps our Far East friends know that very few UK TV sets have a picture width control which can be adjusted by the customer and this may be the reason "Japanese".

Each character displayed in this mode is made up of 8 x 8 pixels. The built-in character set covers 8 x 8 pixels, but in this mode the left-hand two columns of pixels are not displayed.

When the screen mode is changed to 0 or 1, the character set is copied from ROM (Read Only Memory) to RAM (Random Access Memory) so the system is possible to re-define any of the 256 characters. This feature allows special characters to be displayed without going into high-resolution mode. Two of the screen colours can be used in this manner: 0 mode — one for foreground and one for background.

SCREEN 1 is the second of the text modes and gives a format of 24 lines each of up to 30 characters. Again the screen on default width is less than the maximum possible — the default for screen 1 is 20 characters per line. To get the full number of characters per line enter WIDTH 30, but usually all UK PCs the left-most character would be off the edge of the screen.

The MSX specification defines the use of two colours in SCREEN 1 mode. In later

■ **Program 2** — demonstrates the speed of MSX computers:

```
100 COLOR 15,1,1:SCREEN 2
110 FOR FX=1 TO 100
120 LINE (RND(1)*256,RND(1)*192)-(RND
(1)*256,RND(1)*192),RND(1)*16+2,BF
130 NEXT FX
```

Issues of MSX COMPUTING, we will describe a programming method which allows all 16 colours to be displayed.

At present the character set is split up into 32 groups of eight characters and the foreground and background colours of each group are the same effectively giving a two colour display. Our method will allow how to alter the foreground and background colour of all these 32 groups.

Remember it is also possible to redefine the shape of each character in screen 1 mode.

**SCREEN 3** is the high resolution mode which has 256 x 192 pixels definition. All 16 colours can be displayed at the same time.

The horizontal colour resolution is eight dots which means that in every group of eight adjacent horizontal dots, there can only be one foreground colour and one background colour. Any two of the 16 colours can be used for each group of 8 dots. The vertical colour resolution is one pixel, therefore any of the 16 colours can be placed next to each other vertically. There are many commands for creating 16 resolution patterns and they are all very flexible.

**Program 2** demonstrates the speed of the computer and also shows all the colours. First the computer is put into **SCREEN 3** (it is in mode 1) and then 100 lines of random dots and colours are displayed.

There is a command which allows printing of normal text on the H-res screen. As the text can be placed anywhere on the 256 x 192 grid, this allows much greater control over where it is printed than in either of the text modes.

**SCREEN 3** is the multi-colour mode and has 64 x 64 resolution. Each of the 3072 pixels on the screen can be in any of the 16 colours.

When key is pressed to this screen, all the pixels that make up the characters turn on one

■ **Program 3** — a knight-shaped sprite bounces off the screen edges:

```
100 COLOR 15,1,1:SCREEN 2,3
110 SS="":FOR FX=0 TO 31:READ AS
120 SS=SS+CHR$(VAL("BH"+AS)):NEXT FX
130 SPRINTS(B)=SS
140 DATA 0,1,6,10,24,24,24,17,40,77,7
0,10,7,2,30,70,10,87,63,14,03,40,51,7
3,77,37,31,41,81,81,79,70
150 XS=128:YS=56
160 XSK=1:YSK=1
170 PUT SPRITE 0,(XS,YS),13
180 XS=XK<XK<YS<YS=XK
190 IF XK<0 OR XK>240 THEN XSK=-XSK
200 IF YK<0 OR YK>156 THEN YSK=-YSK
310 GOTO 170
```

of the **SCREEN 3** pixels which are equivalent to a square of sixteen **SCREEN 2** mode pixels. Since the letters are made up of 8 x 8 dots, and the screen has 64 x 64 pixels, you can get 6 rows of eight characters in this mode. This is useful for title pages etc.

**Program 4** draws 200 lines at random positions on the screen and shows the set of the pixels in the **SCREEN 3** mode.

MSX computers can display up to 32 sprites at the same time and can remember up to 256 sprite patterns. Sprites are characters whose shape, colour and position can easily be defined. They can be placed much more easily than characters can and there are built in collision detection routines. There are four sprite modes, three are specified by the second parameter of the **SCREEN** command.

The four sprite modes are combinations of large or small sprites and magnified or unmagnified sprites. The modes are as follows:

- 0 8 x 8 unmagnified
- 1 8 x 8 magnified
- 2 16 x 16 unmagnified
- 3 16 x 16 magnified

The numbers refer to the number pixels make up the sprite e.g. a mode 3 sprite has 16 x 16 = 256 pixels. Magnified means that every pixel is the size of a square of four pixels.

# New Series HOW TO USE YOUR MSX MICRO

in the sprites become four times their normal size.

When using a 8 x 8 size, the computer can store up to 256 sprite patterns. When using a 16 x 16 size, the computer can store up to 64 sprite patterns. Remember — only 32 sprites can be displayed at the one time.

**Program 3** shows a sprite in the shape of a knight bouncing off the edges of the screen. To stop the program press the CTRL and STOP keys at the same time.

Try changing both the coordinates of the number 1 in line 160 to 2 and note that the sprite moves faster.



Watch  
out for  
more  
NEWS  
of MSX  
in

## Home Computing WEEKLY

■ **Program 4** — shows 200 lines and shows **SCREEN 3** pixel size:

```
100 COLOR 15,1,1:SCREEN 3
110 FOR FX=1 TO 200
120 LINE (RND(1)*256,RND(1)*192)-(RND
(1)*256,RND(1)*192),RND(1)*16+1
130 NEXT FX
```



Commodore 64

VIC-20

DRAGON 32

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No.1

LATEST NEWS

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### **ELECTRO ART** - Electron £14.95

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Create your own works of art with this simple to use, yet sophisticated, feature rich art tool which includes a full machine code Paint routine allowing you to colour fill any shape. ELECTRO ART is supplied in a box with a full instruction manual.

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### COMING SOON

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The outstanding Galt-Bald 3D graphics of the breathtaking city of Antichlor are now available on the Commodore 64. Battle the giant ants to save your home!

### COMING SOON

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### COMING SOON

### **GAMES 64** - Spectrum 48K

From the advanced programming project designer of the SOFTWARE STUDIOS - GAMES 64, an Olympic spectacular!

# QED??



WIMBETH: These programs are sold according to Quicksilver Ltd's terms of sale and conditions of sale, copies of which are available on request.

## Mined-Out 48K Oric/ Atmos £6.95

Quadraxis, PO Box 4, Wals  
Surrey, Surrey EC20 7TP

A welcome change from space wars, Mined-Out requires those little chain-beans with their tails round you to lead to treasure. You are situated in the heart of a mountainous area which you must carefully push your way to reach the next level. The story is that the treasure and the mines told you only have one chance. All is not lost, however, most players find it takes one or three weeks to take points and by giving the old penny game a working, it is possible to find a real gem!

As you progress, various improvements occur but ultimate success is achieved when you

reach level 4 and are permitted to mine the famous ore. But the Worms. A new, very tricky! It is called for the bit is better.

A clever game, simple to play, but requiring skill to master. For most thoughtful players it should provide some hours of diversion.

My only problem are that only a few local games in existence and the only one, although ensuring did not deserve the price you actually **P.G.W.**

instructions	100%
playability	95%
graphics	90%
value for money	90%



## Gatecrasher 48K Spectrum £6.95

Quadraxis, PO Box 4, Wals  
Surrey, Surrey EC20 7TP

No, it's not pump time! You must drop, but not too close to anything, being so you are killed. But each of the nine levels is the best of the many. However, the fourth level and fourth life are beautiful!

If a level drops on to a gate it means in the distance the gate is closing and that's a trap.

A few well timed if a second level falls on it — and you're killed on only 20 levels per —, or only the most can fall! You are able to escape the gate on to a new one and there's an earthquake feature which randomly shows some of the areas.

Levels, time and life are a challenge here. You must use the fourth level carefully, as it is a level drops on a few it means you're in a trap on the top.

The keys are not difficult to master. The fourth level is a challenge, as it is a level drops on the top of the gate a different version of the game.

Anytime, time to find the becoming much more of the

instructions	100%
playability	90%
graphics	100%
value for money	100%



## Ugali 48K Spectrum £5.95

John, 11/13 Riverside  
London WC1

The Ice Age is coming to Ugali, so to speak, as you have to make them the Pharaoh's egg! Pretty, like the Pharaoh, turned out above the Pharaoh's egg, you can play.

All Ugali you have to do is to get the egg. You have an unlimited amount of eggs in your cave — but you can only carry one at a time. When you pick up an egg you have yourself a Pharaoh. Your Pharaoh is shaped and would be very hard to get it to reach the Pharaoh's egg — to get it to a different level you must give up or down, but left or right and be in exactly the right position. The Pharaoh is aware of this and is difficult to move.

Graphics are excellent. Score and lives left are displayed on a scale of zero to twenty, which is not particularly exciting. The game starts with an excellent effect and is undeniably good. The best can be played on, as you can see a wide variety of levels.

Unfortunately, Ugali's ending seemed to be a little bit boring. But Ugali is not and does not appear to be any more. **P.G.W.**

instructions	100%
playability	100%
graphics	100%
value for money	100%



# All-action arcade aces

These fun games are hot news. Test your arcade skill and experience against them

## Encounter CIB £4 £6.95

Strategic

Encounter is about the best strategy game I have seen on the CIBM. It is a great idea based on a simple game which involves shooting and drawing.

Encounter is a full colour game in which you must locate and destroy three enemies. The display is a 10 picture with color and various colors. Encounters on the battlefield reflect those from the ground and the ground itself. Encounters are made in the game. If you lose a display then immediately the game ends your turn.

Once you have killed all your enemies on the level you may go through a gate to the next one. This is a perfect, simple a

strategy. If you can do by one of the options you are awarded to the last level. If you go through you are awarded to the next level and can be to the next level.

The sound is excellent and only makes the game interesting. Graphics are quite colorful. The 10 display is a full color and the 10 picture is a full color. The graphics are excellent and the 10 picture is a full color. The graphics are excellent and the 10 picture is a full color.

instructions	100%
playability	100%
graphics	100%
value for money	100%



## Horace Goes Skiing Dragon 32 £5.95

William, 11/13 Riverside  
Zone, Herts HP20 3LD

Horace wants to go skiing — but the sky is on the edge of a huge road. He must reach the end to get to the next level. He must reach the end to get to the next level.

The first part is a simple game, it is a simple game and the second part is a simple game. The first part is a simple game, it is a simple game and the second part is a simple game.

The graphics are excellent, among the best I've seen on the Dragon. The music is very interesting, with a few more notes and some more notes. The graphics are excellent, among the best I've seen on the Dragon. The music is very interesting, with a few more notes and some more notes.

The game can be played on the Dragon, it is a simple game. There are a few more notes and some more notes. The game can be played on the Dragon, it is a simple game. There are a few more notes and some more notes.

instructions	100%
playability	100%
graphics	100%
value for money	100%







# you eat, the grow

```

300 P=0
310 LEAF=1
320 CHAR=154
330 CALL HCHAR(2,1,128,32)
340 CALL HCHAR(24,1,128,32)
350 CALL VCHAR(2,1,128,32)
360 CALL VCHAR(2,32,128,29)
370 ME="SCOPE" *LSTR$(SC)
380 MD=1
390 MR=1
400 GOSUB 2210
410 ME="PATCH" *LSTR$(PAT)
420 MD=1
430 MR=17
440 GOSUB 2210
450 ME="LIVES" *LSTR$(LI)
460 MD=1
470 MR=23
480 GOSUB 2210
490 FOR MUSH=1 TO NM
500 RANDOMIZE
510 X=INT(31*RN)+1
520 IF X<3 THEN 510
530 Y=INT(23*RN)+1
540 IF Y=1 THEN 530
550 CALL GCHAR(Y,X,M1)
560 IF M1<>32 THEN 500
570 CALL GCHAR(Y+1,X,M2)
580 IF M2<>32 THEN 500
590 CALL HCHAR(Y,X,144)
600 CALL HCHAR(Y+1,X,136)
610 NEXT MUSH
620 FOR LEA=1 TO ND
630 RANDOMIZE
640 X=INT(31*RN)+1
650 IF X<3 THEN 640
660 Y=INT(23*RN)+1
670 IF Y=1 THEN 660
680 CALL GCHAR(Y,X,MAL)
690 IF MAL<>32 THEN 630
700 CALL HCHAR(Y,X,129)
710 NEXT LEA
720 CALL HCHAR(A,B,CHAR)
730 CALL HCHAR(A-F,B-J,152)
740 IF G<>32 THEN 1190
750 CALL KEY(O,X,Y)
760 IF Y=0 THEN 1130

```

```

770 IF X=83 THEN 810
780 IF X=68 THEN 890
790 IF X=69 THEN 970
800 IF X=68 THEN 1090 ELSE 720
810 B=B-1
820 F=0
830 J=-1
840 P=-1
850 D=0
860 CHAR=156
870 CALL GCHAR(A,B,G)
880 GOTO 720
890 B=B+1
900 F=0
910 J=1
920 P=1
930 D=0

```

## Notes on execution

If you are going to try and control the program to another machine, then remember the following points:

1. The Texas has a 24 by 32 graphics screen.
2. It has a 24 by 28 text screen.
3. It uses anti-aliased graphics.

A good number of keys can be used by using multiple line commands. Below are the most unusual commands.

**CALL CHAR** (ASCII code number, horizontal setting). Below characters used in the program. The horizontal setting describes the pattern to be given to the character with ASCII code value.

**CALL HCHAR** (row number, column number, ASCII code, number of repetitions). Places character on screen at row and column specified, and repeats it horizontally the number of times stated. If the fourth value is omitted then the character is displayed only once. The character used is the one whose ASCII code appears in the command.

**CALL VCHAR** (row number, column number, ASCII code, number of repetitions). Works the same way as **CALL HCHAR** only repeats vertically stated or horizontally.

**CALL GCHAR** (row number, column number, numerical variable). Equivalent of **PRINT**, except ASCII code of character is row and column, stated in numerical variable.

**CALL CLEAR** Clears the screen. Equivalent to **CLS**.

**CALL SCREEN** (background color). Specifies screen colour, using colour code.

**CALL CROUSE** (character on screen, foreground colour code, background colour code). Specifies foreground and background colour for all characters on screen.

**CALL SOUND** (frequency, for quantity, volume). Produces sound with duration, frequency, and volume specified. Duration is in milliseconds, frequency in HZ and volume in 0.001 from 0 (quiet) to 25 (scream).

**CALL SET** (key code, L, R). Sets value of **INKEY%** or **GET%**. Returns code of key pressed in variable L.

These are the 26 colours:

- 0 background
- black
- medium grey
- light grey
- dark blue
- light blue
- dark red
- red
- medium red
- light red
- dark yellow
- light yellow
- dark green
- medium green
- light green
- white

```

940 CHAR=155
950 CALL GCHAR(A,B,Q)
960 GOTO 720
970 R=R+1
980 F=1
990 J=0
1000 P=0
1010 Q=-1
1020 CHAR=153
1030 CALL GCHAR(A,B,Q)
1040 GOTO 720
1050 R=R+1
1060 F=1
1070 J=0
1080 P=0
1090 Q=1
1100 CHAR=154
1110 CALL GCHAR(A,B,Q)
1120 GOTO 720
1130 B=B+P
1140 R=R+0
1150 CALL GCHAR(A,B,Q)
1160 IF Q=32 THEN 1170 ELSE 720
1170 CALL HCHAR(A,B,CHAR)
1180 CALL HCHAR(A-F,B-J,152)
1190 IF Q=129 THEN 1230
1200 IF Q=128 THEN 1710
1210 IF Q=152 THEN 1590
1220 IF (Q=136)+(Q=144) THEN 1660
1230 CALL SOUND(99,-1,2,320,0,55
0,3)
1240 SC=SC+10
1250 LEAF=LEAF+1
1260 Q=32
1270 HS=STR$(SC)
1280 ND=1
1290 NR=7
1300 GOSUB 2210
1310 IF LEAF=NOL+1 THEN 1320 ELSE
E 720
1320 CALL SOUND(100,440,0.540,2)
1330 CALL SOUND(100,550,0.650,2)
1340 CALL SOUND(100,440,0.540,2)
1350 CALL SOUND(100,440,0.760,2)
1360 CALL SOUND(100,880,0.980,2)
1370 FOR NUCD=3 TO 23
1380 CALL HCHAR(NUCD,2,32,30)
1390 NEXT NUCD
1400 HS="WELL DONE-PATCH "+STR$(
PAT)+ " COMPLETED"
1410 ND=5
1420 NR=3
1430 GOSUB 2210
1440 HS="BONUS OF "+STR$(PAT+LI+
10)
1450 ND=7

```

```

1460 NR=10
1470 GOSUB 2210
1480 SC=SC+(PAT+LI+10)
1490 HS=STR$(SC)
1500 ND=1
1510 NR=7
1520 GOSUB 2210
1530 PAT=PAT+1
1540 NOL=N+PAT
1550 NDR=NDR+5
1560 FOR DELAY=1 TO 500
1570 NEXT DELAY
1580 GOTO 70
1590 CALL SOUND(600,110,30,110,3
0,500,30,-8,0)
1600 FOR NU=1 TO 6
1610 CALL COLOR(16,7,1)
1620 CALL COLOR(16,11,1)
1630 NEXT NU
1640 LI=LI+1
1650 GOTO 1810
1660 FOR V=0 TO 30 STEP 2
1670 CALL SOUND(-99,-6,V)
1680 NEXT V
1690 LI=LI+1
1700 GOTO 1810
1710 FOR V=30 TO 0 STEP -1
1720 CALL SOUND(-250,-2,V)
1730 NEXT V
1740 FOR V=0 TO 30
1750 CALL SOUND(-500,-2,V)
1760 NEXT V
1770 FOR NUCD=3 TO 23
1780 CALL HCHAR(NUCD,2,32,30)
1790 NEXT NUCD
1800 GOTO 2050
1810 HS=STR$(LI)
1820 ND=1
1830 NR=29
1840 GOSUB 2210
1850 IF LI<1 THEN 1940
1860 Q=0
1870 P=0
1880 Q=32
1890 CALL HCHAR(A,B,CHAR)
1900 CALL HCHAR(A-F,B-J,152)
1910 CALL KEY(Q,K,S)
1920 IF S=0 THEN 1910
1930 GOTO 720
1940 FOR SD=150 TO 110 STEP -1
1950 CALL SOUND(-100,30,0)
1960 NEXT SD
1970 FOR NUCD=3 TO 23
1980 CALL HCHAR(NUCD,2,32,30)
1990 NEXT NUCD
2000 HS="GAME OVER"
2010 ND=9

```





1999



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